

THE
CHICAGO MEDICAL JOURNAL.

Vol. XXV.—MARCH I, 1868.—No. 5.

PHYSIOLOGY.

Investigations into the nature of Miasmata furnished by the human body in health (read before the Academy of Sciences, the 10th of September, 1867, by Dr. Lemaire J. Paris).

TRANSLATED EXPRESSLY FOR THE JOURNAL BY WALTER HAY, M.D.

(Continued from page 100.)

In the first part of this work, I think that I proved that the confined air of the barrack and of the casemate, in which I made my experiments, contained a considerable quantity of microphytes and microzoa in process of development.

The extreme neatness of these apartments, and the recent whitewashing of their walls with lime, forbids the supposition that these little beings could have been furnished from dust or dirt accumulated upon the walls or the furniture.

The composition of the vapor of water collected in the exterior atmosphere near these barracks was so different, that one is forcibly led to the conclusion that the soldiers must have furnished them.

This is the object of this communication. I propose, to-day, to demonstrate what portions of the body give origin to them,

how they are developed and separated in order to be disseminated throughout the air.

The investigations, which I shall announce, have been made upon men and women from 30 to 70 years of age, and in perfect health.

Regions of the body where they exist. In the course of this work, I propose to demonstrate that the organism in action in a physiological state, in perfect health, not only does not furnish microphytes and microzoa, but that it destroys them. It is outside, upon the organs of the skin, and in the mouth that they are found in abundance.

Skin. It is known that the bodies of persons who perspire freely are covered rapidly with a deposit composed of different substances, and known under the name of filth (*crasse*). It is well known, also, that men and women who neglect those cares of the toilet which cleanliness and health demand, sooner or later exhale from certain regions a disagreeable or foetid odor. The axillary, the ano-perineal, the inguino-scrotal, and the inguino-vulvar regions, the feet, especially between the toes, and the nails are in this condition.

If, after having cleansed these regions with the greatest care with the aid of a solution of saponine, perspiration is excited, and six hours afterwards the sweat is collected and examined with a microscope, there will be found, independently of little fragments of epithelium and of fatty matters, bodies spherical, ovoid, and cylindrical, similar to those whose existence I determined in the confined air of the barrack and the casemate. If, in summer, the washing of the above mentioned parts of men and women be neglected during forty-eight hours, and if perspiration be excited so that a little sweat may be collected, there may be established, except under the axillæ, the presence of bacteria termo and puncta, and of little vibriones. If the bathing of the same regions be neglected during fifteen days, the pasty substance which collects then exhales, about the feet and the genital organs, a foetid odor. It reddens litmus paper faintly. In this condition, if perspiration be provoked and this matter be examined with the microscope, the

existence of the following bodies may be determined: epithelium, globules of fatty matter, some crystals, diaphanous bodies already spoken of, in great numbers; myriads of bacteria (bacteria termo, bacteria catenula formed of two, three, four, and even five segments); bacteria puncta; otick or wand-like vibriones of different dimensions, little spirilla-volutes and ovoid monads of which some were excavated.

The foetid dirt packed under the nails of the big toes, diffused in a little distilled water, contained bacteria and little vibriones.

The matter collected during fifteen days under the armpits, contained numerous ovoid spores and only a few bacteria-termo. It reddens litmus paper.

The dirt taken upon the anterior portion of the chest, the epigastrium, the abdomen, and the lumbar and dorsal regions reddened litmus paper strongly. I diffused it in a little distilled water, and found in it numerous diaphanous bodies, ovoid, spherical and cylindrical; also many round spores exhibiting a central nucleus, which made them resemble a piece of money; others ovoid, of which a certain number budded. Some were bi-lobed. The round spores were four to five ten thousandths of a millimetre in diameter. The dimensions of the ovoid spores varied from thirty-five to forty-five ten thousandths of a millimetre in length, and from twenty-five to thirty-five ten thousandths of a millimetre in breadth. I found there no animalcule, which appeared to me due to the strong acidity of the dirt. In the cerumen I found neither spores nor animalculæ.

These experiments are interesting, not only because they demonstrate upon the skin the existence, in great numbers, of the same diaphanous bodies, the same microphytes and microzoa, which I found in the vapor of water collected in the barrack and the casemate, but also on account of the difference which the different regions of the body present in relation to the production of species. The absence of microzoa in the dirt collected upon the skin of the trunk appeared to me to explain

the difference of odor between these regions and those where the animalculæ were developed.

These results confirm those which I obtained in my experiments upon ferments, in order to demonstrate that the order of appearance of infusoria is dependent upon the chemical composition of substances. This influence is so great, that I have been able to come to the production of microphytes where microzoa ordinarily are developed, and reciprocally of these latter in place of microphytes, by adding or removing one or several chemical bodies from a natural substance.

The existence of microphytes without microzoa in certain regions, and reciprocally the abundance of microphytes without microzoa in others, appears to me to be dependent on the different chemical composition of their secretions (sweat).

I can not too strongly direct the attention to the influence which the chemical composition of substances exercises upon the development of these little beings, because it appears to me to play the most important part in the history of transmissible maladies.

I shall now proceed to examine how these little beings originate upon the skin.

Physiologists affirm that a man in health, in a state of repose, loses, in twenty-four hours, about a quart of sweat. One who walks or works may lose from four to five quarts daily. Now this sweat, independently of the salts, of the fatty and the lactic acids, contains a perceptible proportion of coagulable albuminoid material. All these bodies form upon the skin a deposit, which accumulates every day. It is increased by the deposition of atmospheric dust, and of that which the clothing always contains. This dirt (*crasse*) is maintained in a humid state by the insensible perspiration and the sweat. It is in contact with atmospheric air and constantly submitted to a temperature of + 30° Centigrade (108° 32 Fahr.). All these conditions are most favorable to fermentation, and consequently to the development of microphytes and microzoa.

If a laboring man should secrete in twenty-four hours four or five quarts of sweat, his skin will then have received at the

end of fifteen the residuum of sixty to seventy-five quarts of sweat, to which must be added the dust of the air and of the clothing. If one reflects upon the quantity of infusoria which might be contained in seventy-five quarts of a liquid holding in solution albuminoid matter, it will occasion no surprise that I have found in this matter myriads of microphytes and microzoa. This is not all. The temperature of the confined air would increase several degrees by reason of the confinement. Moreover, the large quantity of watery vapor furnished at each instant by the lungs and by the cutaneous envelope soon saturates a limited atmosphere. Then the skin remains moist, often even covered with sweat.

All these conditions, doubtless, are very favorable to the development of these little beings, not only upon the skin, but also in the atmosphere in which their reproductive bodies are maintained by reason of their tenuity.

The miasmata which are disengaged from marshes, in warm countries, in which the temperature approximates to that of the human body, exercise a more prompt, and much more violent action than those which are developed in more temperate climates.

I have made experiments in the open air, at Paris, when the thermometer indicated $+35^{\circ}$ or even $+36^{\circ}$ Centigrade in the shade. Food, albuminous solutions and other alimentary matters entered rapidly into a state of fermentation. Twelve hours sufficed in order to develop in them bacteria and vibrios. It is therefore incontestable that this elevated temperature renders their reproductive bodies more vigorous, and causes them to arrive more rapidly at the adult state, since at a temperature of 15° to 20° Centigrade at least forty-eight hours is necessary to attain the same result. The elevated temperature of the human body may therefore hasten their development by rendering them more vigorous.

May it not be necessary to refer to this greater vigor, the formidable effects produced by the miasmata evolved from the marshes of hot countries, and by the human body in health? I postpone the consideration of this question; but will, at this

time, make use of the fact to explain the presence of animalculæ entirely developed six hours after the condensation of the vapor of water collected in the barrack and in the case-mate, as it will equally serve to explain why the vapor of water condensed in the open air, above the fortification, furnished animalculæ only after an interval of forty-eight hours. The temperature was only $+16^{\circ}$ Centigrade, and their reproductive bodies proceeded from another source.

Micrographs have long since determined that the blood and also the milk removed from the vessels, as well as pus, the remains of the food, and the pultaceous matters which collect upon the teeth, may contain a considerable quantity of micriza. The sweat which is supplied at once by the water of the plasma and by the sudoriprour glands, is in the same category as these liquids. Once deposited upon the surface of the body, it ceases to be protected by vitality, and becomes subjected to the common law, *fermentation*. As there is, strictly speaking, no fermentation without infusoria, such appears to me to be the origin of those which I have found in so great numbers upon the skin.

In the experiments whose results I have presented to the Academy, I have demonstrated that the gases and vapors disengaged during alcoholic fermentation and during putrefaction, carry with them into the atmosphere in considerable quantities of germs (propagules) spores and reproductive bodies of microzoa, and even of those little beings entirely developed. It is in this manner that those which exist upon the human skin, appear to me to be carried into the atmosphere.

I would suggest, that, at the present time, both in France and abroad, it is admitted by a great number of physicians that favus, tinea tonsurous, sycosis, and other diseases of the skin are the work of microphytes. These diseases, as is known, are transmissible. In the ages which preceded our own, and even now, physicians acknowledge that uncleanness is the principal cause of these obstinate maladies. We have just seen that uncleanness engenders microphytes and microzoa.

Here I am upon the domain of pathology, upon which I do not wish yet to enter. I will mention only, because all these facts are linked together, that I demonstrated at l'hôpital, St. Louis, the existence of spores of the achorion Schonbeinii in a confined atmosphere occupied by patients subjects of favus.

Mucous Membranes. The existence of infusoria in the mucus which rests upon these membranes has been indicated.

I have collected from several persons, in perfect health, nasal, buccal, pharyngeal, urethral, and vaginal mucus, and bronchial expectoration, and have found in them no infusoria. I have done more—I have preserved this mucus in little bottles corked with emery, in the presence of air, and I have proved that it resisted putrefaction for a much longer time than other organic matters.

These facts agree with those which M. Robin has observed. This skillful observer remarks that organic matters taken into the normal blood, resist putrefaction more than those collected in marshes.

After these facts, I am led to believe that the infusoria which have been found in the mucus have been developed under the influence of a pathological state, or of uncleanness.

Mouth. I have stated that the existence of bacteria and vibriones had been recognized in the remains of the food, and in the pultaceous matters collected upon the teeth. I will add, that persons having carious teeth and irritable gums present moreover, in considerable quantity, spirilla volutantes and monads. There are few adults, otherwise perfectly healthy, who have not some carious teeth, some of this pultaceous matter, and who do not permit some remains of their food to collect between their teeth. It will be understood that those who breathe by the mouth would diffuse through the atmosphere some of these microzoa. It may be demonstrated in the following manner: let the products of respiration passed through the mouth of a man having carious and filthy teeth be directed upon a vessel filled with ice. The vapor of water driven

out from the lungs condenses there. There will be found in this liquid, independently of reproductive bodies of microzoa, bacteria and vibrones.

The two bacteria catenala, and the two vibrones which I found in the vapor of water from the casemate, at the moment of the condensation, originated without doubt from the dirty mouths of the soldiers. As I shall demonstrate presently that the vapor of water exhaled from the lungs contains no infusoria, it is therefore, in this case, the mouth alone which could furnish them.

Products of Expiration. It is generally admitted that the products of respiration contain organic matters, to which a very prominent part has been assigned in the history of miasmata.

In order to demonstrate their existence, the vapor of water disengaged by the respiratory organs has been condensed, by the aid of cold. This liquid has been left to itself at a temperature of twenty degrees, and some days afterwards it has been observed, that there was formed in it matter which remained suspended; it exhaled the odor of putrefaction. The same experiment has been made upon the air of dissecting rooms, of hospitals, and upon that of marshes. The same phenomena are produced. This matter has been analyzed in all these cases; it contained azote, but a microscopic examination was forgotten.

I have already demonstrated that the matter formed in the vapor of water condensed by this process, over animal matters in a state of putrefaction, and over the marshes of Sologne, is composed of microzoa and microphytes. That which was developed in the vapor of water collected in the barracks also presented a deposit formed of microphytes and microzoa.

Finally, in that which was condensed in the open air, there was produced likewise a deposit, but much less abundant, which may be composed also of microphytes and microzoa, or of microphytes alone, according to the locality. In an experiment which I repeated before M. Chevreul we established this last fact.

This matter, as is seen, is due, in every case, to the develop-

ment of living beings. When one has reflected that at the moment of condensation the liquid is limpid, and consequently contains no matters in suspension visible to the naked eye; that if it contained either albumenoid matters or fragments of tissue, the one and the other would be fatally destroyed and reduced to their elements by putrefaction, it is probable that one would come to recognize their true nature. In the explanation which is usually given of its formation and its mode of action, this matter ought at once play the part of ferment, decompose itself and develop itself, which is impossible. The demonstration which I have made appears to me to solve this question.

Independent of the facts which I have just reported, and which appeared to me of the highest importance in the history of miasmata, I have established also another which appears to me of no less interest; it is that no deposit is formed in the condensed vapor of water arising from the products of respiration, whilst the contrary is generally believed. Here experimenters have been led into error by their mode of operating.

I have just stated that a deposit, composed of living beings, was formed in the vapor of water condensed from the open air, and that the products of respiration which traverse the mouth carry with them microzoa. The deposit observed in this case is composed of the microphytes and microzoa contained in the mouth and in the air. By observing certain precautions which I shall explain, it may be demonstrated, as I have done in the presence of M. Chevreul, that not only there is no deposit produced, but that there are developed neither microphytes nor microzoa.

Observe how I make this demonstration: I cleanse in advance the entire buccal cavity and the throat with water containing two per cent of tartaric acid, which kills microzoa. I then wash all these parts thoroughly with pure water. I experiment in the morning fasting, in order to avoid the emanations from food, drink, etc., in the following manner: I inspire air through the nostrils and pass the products of expiration through a tube having a bulb surrounded with ice,

avoiding carefully the introduction of saliva. For this reason I hold one extremity of the tube between my lips. Twenty minutes suffice to obtain several grammes of condensed vapor. The liquid at the moment of its collection, contains fragments of epithelium, some very small globules, and some black grains, also small; these last appear to me to be carbon. This liquid, placed in a flask stopped with emery, has been examined with the microscope, every two days, in summer, during one month. It has never afforded either microphytes or microzoa, and remained limpid. I repeated this experiment ten times. It has always given me the same results. I have preserved this liquid for a year. It has remained as clear as at the first day.

I proposed to myself the inquiry, if these globules which were found in this liquid might not be the reproductive bodies of infusoria, which could not develop themselves in this liquid, by reason of the absence of food. In order to enlighten myself upon this point I made the two following experiments: To five grammes of this condensed vapor I added fifty centigrammes of albumen obtained from a newly laid egg. I made a comparative experiment with five grammes of distilled water and fifty centigrammes of this same albumen. The two flasks containing about six volumes of air to one of liquid, were shaken, stopped with emery, and left to a temperature which varied from twenty-two to twenty-five degrees Centigrade. I found no difference in the number, nor in the species of animalculæ which were developed in these two liquids, nor in the date of their appearance.

These experiments appeared to me to demonstrate that the products thrown out by the human lungs in health contain neither microphytes nor microzoa.

Now it remains for me to discuss the most difficult point of this question, that is to say, whether these little beings are the cause of typhus, of typhoid fever, of cholera, etc. I have already expressed my opinion upon this subject in 1861. But science demands facts. It is with facts that I shall undertake to solve it, if the Academy will still favor me with its courteous attention.

(To be continued.)

CLINICAL CASES.

No. 1. E. M., age 25, female, presented herself for treatment, for large two-lobed fibrous tumor in the posterior claviculo-scapular region, of two years' duration. Incision was made, and it was found to be in two distinct lobes; firmly attached to the surrounding structures, clinging closely to the clavicle, and running across to spine; there was some hæmorrhage; all the arteries were preternaturally large. The entire tumor was removed, and wound dressed with Ung. Zinci. Oxid. She afterwards presented herself entirely cured.

No. 2. A. W., age 40, male. Has been a sailor, and on the coast of Africa had what is termed the "Guinea Worm." He states that a worm two inches long came out of his leg, below the knee. I believe the leg is bitten, and an egg laid therein, which is hatched within the tissue. When the worm attempts to make its exit, a small stick is passed under it, on which it is twisted, and thus drawn out. His leg is now much inflamed and swollen, and a cooling lotion was ordered to subdue the inflammation. I give this case as being rather a rare one in these parts.

No. 3. A case of exhaustion and death from hæmorrhage. J. S., age 21, male. Dec. 21st, was struck on right side of face and head with a lager beer mug, inflicting two wounds; one, two inches and a half in length, directly in temporal region, and one, one inch in length, just beneath the right eye. He bled profusely, and was carried to the hospital. The wounds were simply dressed with adhesive strips. Sixty hours after injury he left the hospital for his house, and in twelve hours afterwards was attacked with hæmorrhage from larger wound. Two hours after this I saw him and he was pulseless. His face was anemic. The bleeding was but slight, and the patient was scarcely conscious. He had evidently lost much blood, for I measured three pints, and could of course

get nothing like an actual measurement of *all* he had lost. It was impossible to ligate the bleeding vessel, for it was minute and deeply laid, and had retracted greatly. Monsell's solution was freely used, and hæmorrhage arrested. Stimulants and opiates were given freely to the patient, and the following morning he was comparatively in good condition. About noon hæmorrhage again set in violently, but was arrested by means of acupressure needle and compress. This wound bled no more, but the following day the smaller wound bled excessively before it could be arrested. Erysipelas supervened on the following day, marked with violent inflammatory symptoms and raving delirium. Bleeding now occurred from his gums and nose, and three days before his death hæmatemesis set in, which was only held at abeyance with five grain doses of Subsulph. Ferri. The patient died from exhaustion from hæmorrhage occasioned by wounds. On *post-mortem* examination I found no signs of disease in any of the organs. The wounds had in no way communicated with the brain, and the orbital branch of the temporal artery was found severed. The brain was pale and bloodless; the tissues were all pale and anemic, and the thoracic and abdominal viscera were white and blanched throughout.

Yours,

E. R. H.

HYGIENIC TREATMENT OF PATIENTS.

BY J. LITTLE, M.D., LE ROY, ILL.

THERE is a vast number of important and interesting subjects in the domain of medical literature suitable for essays, but the selection of one was the most puzzling thing I had to do in discharging the duty assigned me by the worthy president of this honorable society. The principal reason for this was that every subject has been written on by learned authors, and lectured upon by our medical teachers, so that any phy

sician can turn to his library and open a book or journal, and read a more complete and able article than a country practitioner can write. It is for mutual improvement that we meet together, and I feel that it is the duty of each member to perform every task appointed him, and do all in his power to augment the interest and achieve the objects of our society.

I propose in this brief essay to say something about treating patients, as the treatment of every disease to which flesh is heir is fully discussed in our books, and I have not the vanity to believe that I have any thing new to offer on this topic, nor am I sure that what I shall say on that will be instructive or interesting. The treatment of diseases has been the great theme to which the attention of the medical savant as well as tyro, has been directed from the dawning of the science of medicine to the present time. To be cured of their maladies is what the afflicted want, and hence it is that all other subjects pertaining to medicine are considered subordinate to this, and the treatment of disease with drugs, medicines, charms, electricity, etc., has always been the great business of the "medicine man."

The treatment of patients is a theme not often discussed by medical societies; at all events, it has not been my good fortune to hear any such discussion. It may be said that the patient is always treated in treating his disease. That he should be treated is a self-evident proposition, it seems to me, but that he is properly treated in even following the directions laid down for the treatment of diseases by such authors as Wood, Watson, and Eberle, is evident to any person of ordinary intelligence. The symptoms, causes, clinical history, anatomical changes, diagnosis, prognosis and treatment are dwelt on at length, and maturely studied, and occasionally a few casual remarks are made in regard to cleanliness, dietetics and nursing the patient. Emetics, cathartics, bloodletting, stimulants, tonics, epispastics, opiates, etc., are spoken of minutely and the case dismissed. The whole discussion has been about the disease in its various aspects, and hardly a sentence has been uttered concerning the poor patient. His

system is made the battle-field in which a war of extermination is waged against the disease by the doctor. Sometimes the struggle is fierce, obstinate, and bloody, and at other times it is exceedingly protracted, giving the combatants a splendid opportunity to display their tactics. To-day the physician seems to be master of the situation, and being encouraged he redoubles his efforts to drive his enemy to the wall, but on the morrow, when he revisits his patient, he finds that the disease has rallied its broken and scattered forces, and is making rapid and fearful advances. The gallant and faithful physician, believing his policy is right, determines to fight it out on "this line," and actively plies his pills, powders, tinctures, syrups, decoctions and teas, but still to his great astonishment the disease does not yield, but maintains its position with remarkable stubbornness.

The battle is now raging furiously between the doctor and the disease, each firmly fixed in his purpose, the latter to destroy the patient, the former to destroy the disease. Every organ in the body of the now prostrated patient bows submissively to the tremendous efforts of the physician to overcome his inveterate opponent. Finally, to make quick work of it, the doctor turns his heaviest pieces upon the strongholds of the disease, and accordingly fifteen grains each of *Calomel* and *Jalap* are sent rumbling along the alimentary canal to drive it out, a huge blister is applied over the spinal column or chest to draw it out, powerful diuretics or diaphoretics are administered to wash it out through the urinary apparatus or the pores of the skin, a pint or two of blood is withdrawn from the arm in hopes to capture it alive; and, while this bombardment is going on, the devoted doctor keeps his line of skirmishers well advanced, and maintains a continuous fire of small arms in the form of *Dover's powders*, *Sweet spirits of nitre*, *Paregoric*, *Rhubarb*, and tinctures and infusions of various kinds. And it sometimes happens that after the vigilant and untiring physician has completely exhausted his armamentarium, has fired the last round in the locker without any apparent effect, so far as curing the disease is concerned, and

has retired from the scene of action in disgust, the disease sounds the retreat and quietly takes its departure, leaving the patient to himself—and he gets well. The patient is amazed at his recovery; his friends are delighted, and the doctor is nonplussed, and blames himself because he abandoned the patient so soon. Occasionally, while the physician is deeply absorbed in fighting the disease, the patient succumbs, leaving his friends in doubt which killed him—the doctor or the disease.

Now what I charge against the science of medicine, as generally taught and practiced, is, that disease is treated to the injury and neglect of the patient; but this is not true to the same extent of late years as in former times. I do not mean that the profession has directed too much attention to the study of disease, but too little to the care, comfort, and happiness of the patient. In my humble opinion, the sick person should receive the first consideration of the physician, and the disorder should be studied and treated afterward.

Suppose a person has been sick a week or two, and has lain in bed, with only such care as one unacquainted with the science and art of medicine would bestow. A physician is called to see him, and stops just long enough to make out a diagnosis and prescribe the usual remedies for the disease. Every day the visit is repeated, and medicines of various kinds are left for the treatment and cure of the malady, to be taken in obedience to very strict directions. The case lingers, and the patient and his friends become discouraged; the attending physician is dismissed, and another one called. When the second one comes, he takes a general survey and a comprehensive view of every thing around and in the house; he scrutinizes the bedding and clothing of the patient, the room, and all its furniture; he inquires into the kind of food and drink taken; he observes the cleanliness of every thing, and the light and ventilation of the sick chamber; he asks about the company and attendants; in short, he carefully examines into every thing that has any bearing in the case, and then directs that every thing hurtful be put away, and that the patient be placed

in the most comfortable and sanitary condition possible. Then, unless the case is urgent, or there is a clear and positive indication for medicines, he leaves his patient without any in order to see what effect the changes he directed to be made will have by his next visit, when he will be more competent to decide what medicines to prescribe, if he should then think any are needed.

The scientific and conscientious physician makes haste slowly in treating the disease, but rapidly in treating his patient. He knows that the majority of sick people would recover just as quickly and surely without medicines as with them, if they were properly nursed and cared for. The charlatan teaches the people that they would surely die when sick unless they took medicines, and that all recoveries are attributable to them. The unprincipled fellow is always loudly boasting in public places of his ability to cure all diseases with his drugs and medicines. His heart is full of deceit and dishonesty; he has more brass in his face than brains in his head, and there is nothing too mean and contemptible for him to do in his trade of humbugging the people. It is among the ignorant in community that he has patrons, and what is needed to drive him and the vast herd of quacks and impostors that infest the land to honorable callings, is a general diffusion of knowledge. The regularly educated physician makes no pretensions, but modestly performs his professional duties, spending his leisure hours in study instead of gassing.

What is disease? Is it an entity or a condition? Does it invade the system of an individual as an enemy invades a country? Does it make its advances and attacks upon the organs of the body as an army does upon the forts, and cities, and territories of a nation? And must the physician proceed forthwith to fight the disease and expel it from the animal economy with powerful and hurtful agents, as the forces of a nation would drive an invading army from its possessions? Does the disease mean death and destruction to the patient, unless arrested in its career, or is it not rather a remedial effort on the part of the system to get rid of a morbid agent or process? Then if

disease is not an independent existence, bent on the destruction and death of the patient, but a morbid state of the anatomy and physiology constituting the standard of health, are we justified in treating it by introducing into the system of the patient agents that are poisonous, and always more or less injurious to the organism, to the neglect of other means of acknowledged value and innocence under all circumstances? Is not the heroic plan of treating diseases opposed to the present teachings of physiology and pathology, as well as all the natural sciences? It is now the teaching of our medical schools that many of the most common diseases are self-limited, and tend to recovery from the first if not complicated with drugs, and the day may come when it will be discovered that all diseases are self-limited and tend to a favorable termination. No physician will deny, I presume, that hygienic management of patients upon all occasions is safe, proper, and necessary. Then is it not always better to travel a sure road, though it may not be the shortest one, to a given point, than to attempt to find a nearer one by wading through muddy water of unknown depth, and run the risk of losing your life?

We are taught that there is in every organized being a certain conservative power which opposes the operation of noxious agents, and labors to expel them when introduced into the system. This power has long been recognized; it is the "*vis medicatrix naturæ*" of Galen, and we all court its favor. Were it not for this power, sickness and death would be far more common than they are; nay, they would claim undisputed authority over every creature at the very threshold of animal life. Thus the natural tendency of organized bodies is to health and life, and not to sickness and death. Occasionally the causes of disease are too numerous and powerful for the conservative power or resistive force to repel, and sickness is the result. Or, in other words, the individual has violated the laws of his being to such an extent that an unnatural or forced state of his organism takes place, which we call disease. "The laws of nature are fixed and poison kills."

From the moment a female conceives, to the time when the

fruit of that conception shall die of old age, it is under the dominion of natural laws. All things that exist came into existence in a regular and lawful way, and they live and die in obedience to law. Man's body is governed by the laws of nature, like every thing else, and he can not violate these laws without suffering the penalty. A man may break a law of society, or a civic law, and hide the fact; or, if the fact is known, the doer may be unknown, or if he is detected he may escape conviction; but nature's laws carry their punishments with them, and the soul that sins must die. Men live under the great material laws of the globe in which we dwell, and there is not a material law that a man can break and not suffer. If a man eats and drinks to excess, if he keeps late hours and revels in fashionable indulgences that fill him with all manner of buzzing pains, he sins against his own body, and suffers the pains and penalties of his own transgressions. Men are almost without law in respect to air, food, over-taxation, and neglect of every kind. They are perpetually committing transgressions which are in time the mother of other transgressions. Many social infelicities, such as irritableness, an unhappy temper, moroseness, are frequently the concomitants of simple indigestion or overwork, or an unduly excited state of the nervous system. Thus men begin by violating the laws of God in the body, and this extends to the violations of the laws of God which regulate the disposition, and these involve a great number of moral traits, and the ramifications are infinite. If a man rides or sleeps in a car or a chamber that is unventilated, or lives in a damp dwelling, and if pains and aches overtake him, if vertigo seizes him, if his brain is poisoned, or if inflammations and rheumatisms ensue, it is in vain for him to go and implead nature, "I did not know I was doing wrong, and I will not do it again." Neither his protestation of ignorance nor his promises of obedience will do any good or make a particle of difference. A man that breaks nature's laws must take the penalty. If a man swallows a dose of poison, it makes no difference that he can prove that he did not know that it was poison, it will destroy his life just the same.

The laws of nature are as immutable, beneficent, and ubiquitous as God their author, and every thing in the universe is governed by them. Every thing in existence has its function to perform, its destiny to fulfill, and as long as it obeys the laws of its being it will be well with it, and when it disobeys these laws it will suffer the penalty. I will then lay it down as a truism, that if an organized body obeys the laws of its being in every particular, it will run its course free from any punishments. No man is so foolish and wicked as to believe that the painful occurrences of this world come by chance, or are inflicted by the Great First Cause for amusement, or to appease his wrath. Then what we call disease comes as a penalty of violated laws, and is a legitimate production or sequence. All diseases are preventable if taken in time; and when a person is sick, he, or his parents, or his neighbors, has violated the laws of nature. Many a man goes on trampling on the laws of his body, and because the penalty is deferred, he thinks he is innocent, but by-and-by the punishments come down upon him. The punishments for the violation of natural laws can never be evaded, for they are self-executing punishments.

Believing then that diseases are the penalties of violated laws, which have we to deal with—the patient or the disease? Which is the active, responsible, intelligent object? If a man contract typhoid fever, variola, or pneumonia, he is to blame, not the disease. This comes as the consequence of trespassing against nature. The man attacks the disorder instead of it attacking him.

We hear a great deal said about diseases attacking people, as if they were rational, ferocious beings, existing some where till an opportunity occurred for them to make an attack upon some unlucky person who happened to go that way. The people have learned this language from the doctors, I presume; and you will hear them tell that a certain boy or girl, or some other individual in the neighborhood, was attacked by the measles, scarlet fever, or ague, and almost killed. The popular notion being that diseases are independent existences,

going about the country in a similar manner and for a similar purpose as that individual spoken of in the Scriptures ; as soon therefore, as an unfortunate person is attacked, a messenger is dispatched in great haste for a doctor, or some patent medicine, and an attack is at once made upon the ferocious disease, and immediately a fight ensues, which occasionally results not unlike the fight between the Kilkenny cats.

The physician's business is to cure the patient, or in other words, to take care of him till nature heals him. "Doctors cure but nature heals," is a maxim worth remembering always. How is the physician to cure the patient ? Having a thorough knowledge of anatomy, physiology, chemistry, pathology and hygiene, and in fact of all the natural sciences, and comprehending the forces and processes of nature, and taking an understanding view of all the circumstances surrounding the patient, he will not be at a loss to know what is needed to effect his cure. The true physician has ever open before him the great volume of nature, and is continually conning its lovely and sublime lessons.

What law of his being has the patient violated to cause his sickness, is a question that suggests itself at once ; for I hold that disease does not come by chance, nor is it self-imposed, but comes as a consequence of wrong-doing on the part of men. Not only must we inquire into man's relation to natural law, but his relation to the outside world, and to every thing affecting him. His age, occupation, nativity, parentage, temperament, food, clothing, condition, and in short, his past and present history in detail, must be known, and then a thorough rational and physical examination should be gone through with in order to find the nature, seat, and cause of the malady. This being carefully and methodically done, the treatment of the case will naturally follow.

It is a law in physics, that the cause being removed, the effect will cease ; and this law holds good in a measure in the organic world. Then the first thing is to find the cause of the trouble and remove it, or remove the patient from under its influence. The relation which they sustain to each other must be broken

up. There is a law of growth, development, maturity, decay and death in the organic world, a beginning, a career, and an ending, and judging from analogy we would conclude that all the morbid processes we call disease are self-limited; and observation and experience prove this. From what has been said, the inference would naturally follow that the cause of the disease being separated from the patient, if too great injury had not been inflicted, and he placed in the most favorable condition as regards the laws of nature, he would recover.

Understanding man's relation to all things that surround him, to the air he breathes, the water he drinks, the food he eats, the clothes he wears, the light and sunshine of day, the darkness of night, to activity and rest, wakefulness and sleep, and the proper exercise of the faculties of his mind, the thoughtful physician will at once see the importance of putting his patient in harmony with nature's forces, agents, processes and laws. All things were created by the Supreme Architect before man was made, and they were created for man because he was given dominion over them, and there is a perfect law of harmony and adaptation between man and every thing in his dominion. It was never intended that man should be a delicate, pale, sickly creature, but hale, strong, prosperous, and happy. It was never intended that two-thirds of the human family should die before living out one-third of man's allotted years. A sick man is a nuisance, but a healthy one is a monument of symmetry and power. It is by going to nature that we get just and right impressions and ideas in regard to medicine, law, and every thing else. When people live in the enjoyment of all the gifts of nature in their purity, there health prevails; but when these gifts become contaminated, as in camps, cities, and on ships, there disease and death prevail.

When we look around us and see how people live, see what they eat and drink, and wear, see what kind of houses they live in, and how little they know of themselves and all the things around them, do we wonder that they are sick? The only wonder is that they are not more sickly, and that the

knell is not oftener heard. When people study themselves more and learn to obey the inexorable laws of nature, then will sickness decrease, and death will come at the end of a natural life in a natural way. Then is it not the duty of the physician to do all in his power to have anatomy, physiology, hygiene, and all the natural sciences studied as much as possible by the masses of the people. Prevention is a thousand times better than cure, is a truth which all should know, and believe, and practice.

(To be continued.)

CASES IN PRACTICE.

BY W. ANDERSON, M.D., LEROY, ILL.

CASE I.

Report of a Case of Instrumental Delivery.—January 23, 1868, called, in consultation with Dr. D., to attend a lady, *æt.* 36, who had given birth to seven children. Dr. D. informed me that when he was called in, labor had progressed for twelve hours; the membranes being ruptured, and the amniotic fluid having escaped. It was a shoulder presentation, with the head in the left acetabulum, the left arm protruding from the vagina, and very much swollen, so that the insertion of the hand into the uterus was impossible, while the force of the uterus was so great as to prevent an adjustment of the fœtus by bringing the head into the pelvis. The arm could not be replaced, and we decided an amputation unavoidable; after performing which, at the shoulder, the feet were brought down with some difficulty, thus saving any further mutilation of the infant, which, however, we knew to be dead before the operation. The knowledge of its death had no influence on our action, and had it been alive, it would have been born alive, in all probability, with one arm. Can some sage practitioner suggest a method of procedure by which such a danger may be avoided?

CASE II.

The well known pestiferous affection, so common in the West, and universal in the army, variously known as prairie itch, ground itch, army itch, etc., may easily be cured by such irritants or caustics as diluted sulphuric acid, corrosive sublimate, or white vitriol; or, what is more certain, the three combined, in the form of ointment, or solution; while all such applications as blue ointment, or Fowler's solution, are useless, or nearly so. This fact may be of use to many physicians, or all who use the latter remedies. The disease, which is exceedingly annoying, can be cured only by being killed in this way, and can not be neutralized, or driven from the system, or cured by alteratives, as many suppose. It is only second cousin to scabies, and *Sulphur* has no effect on it.

CARCINOMA OF THE STOMACH.

BY J. W. DORA, M.D., MATTOON, ILL.

I HAVE recently had the opportunity of performing a *post-mortem* examination (in company with Drs. Morris, Bridges, and Willcox), upon a case of carcinoma of the stomach, and it may be of some interest to the profession to learn something of the history of the symptoms, and of the autopsical developments, as such cases are comparatively rare in common practice, and very difficult to diagnose, on account of the obscurity of the symptoms in most cases (and, by the way, correct diagnosis is of more importance than any thing else in cancerous affections generally), as the treatment is utterly unavailing, and the prognosis universally unfavorable, in carcinoma of the stomach especially.

The subject of carcinomatous affection of the stomach was Philip Crow, age 51 years, native of Ohio, farmer and trader, of robust, healthy constitution, bilious lymphatic tempera-

ment; weight, ordinarily, 175 pounds; height, five feet nine inches; habits of life active. He first began to complain of gastric irritation early in September last, but had felt some dyspeptic symptoms for some three years previous, but paid no attention to it, attributing it to his irregular habits in eating, as he was almost constantly traveling by railroad back and forth to New York with stock, and eating hasty railroad meals, and losing sleep. During one of his visits East, in early autumn, he was attacked with pain in the stomach, nausea, and vomiting, which continued for several days, and was treated by some physician in the city of New York for gastralgia, and received temporary benefit. But not wishing to give a lengthy detail of the progress of the case, I will simply state that I learned from the patient, during my first visit to him, on the evening of November the 22nd, that from the time that the gastric disturbance began in September, he had constantly experienced a gnawing pain in his stomach, when empty, and a dull, heavy, aching pain after meals even of the lightest character, and, also, a very noticeable but marked feature in the case was a continuous pain, extending from the stomach to the left side of the chest and shoulder, so much so that the left arm became very lame. This symptom induced me, at first, to diagnose the case as neuralgia, and prescribed accordingly. There was also a peculiar capriciousness of the appetite, even while the patient was able to attend to business, and travel about, the peculiarity of which was a constant tendency to change diet, not relishing any dish more than two or three times in succession. The symptoms continued without any marked change, except the continued decline and emaciation. The tongue heavily coated with a yellow coat, and bowels obstinately constipated all the time; pulse ranging from 80 to 90; skin cool; no headache during any of the time, and free from pain in any part of his system, except the stomach and left chest. He was visited alternately by Drs. Morris, Bridges, Willcox, and myself, during the two months that he survived after I first saw him, and was treated for the first two or three weeks rather empirically, without success,

we merely treated symptoms; but about the expiration of a month, the emaciation enabled us to discover very distinctly that there was a tumor in the epigastrium, well marked, hard, and resisting to the touch, with considerable tenderness, and an undue prominence of the liver, and those of us who were visiting the case at that time pronounced it to be carcinoma of the stomach, with adhesions to the liver and anterior wall of the epigastric region of the abdominal cavity, consequently our treatment became merely palliative. The diet had been, principally, warm sweet milk, four to eight ounces, about five or six times daily, which sustained the vital forces remarkably for a time. Our prognosis, as given to the patient and friends, of course, was unfavorable; whereupon the patient, like all dying men, was anxious to have more council called in, and we suggested several eminent physicians of Chicago; viz., Dr. N. S. Davis, Dr. J. A. Allen, and Dr. Johnson. The two former not being able to make the visit, Prof. Johnson came down, and examined the patient, and corroborated our previous diagnosis and prognosis of the case. The patient very patiently awaited his final summons to the untried world, which transpired on the 19th inst., from inanition. *Post mortem* was made some ten hours after death: Rigor mortis well marked, emaciation very great. The contents of the abdomen only were examined. Upon opening the abdominal cavity, we found that the omentum as such entirely minus, what there was left of it was agglutinated, in puckered folds, to the transverse colon, and there were extensive adhesions existing between the colon and the scirrhus mass which had once been the stomach, and also extensive adhesions to the liver, spleen, and parietes of the abdomen, both anteriorly and posteriorly, and to the diaphragm. The pancreas was entirely obliterated, and converted into a nodulated mass, adhering to the posterior surface of the stomach. After removing the stomach with considerable difficulty, we could not have recognized it as said organ, had it not been that we were in search of it (*i. e.*), from any resemblance which it retained of that organ. The entire tissue of the stomach was

one scirrhus mass, involving all its coats on the posterior surface. It was nodulated and perforated in several places, yet the orifices were comparatively healthy. Neither the cardiac nor the pyloric were obstructed or constricted in appearance, that we could detect, but the caliber was very much lessened, especially in its longitudinal aspect; in fact the entire organ was contracted to about one-half its normal dimensions. And there was one other peculiarity discovered; viz., there was upon the entire track of the small intestines, as well as throughout the foliæ of the mesentery, small tuberculous-looking bodies, as large as a split pea, of a yellow color, which, I believe, have been named by some writers embryo cancers, or scirrhus lymphatic glands. The diaphragm and peritoneal lining of upper part of abdominal cavity were also thickly studded with these cancerous growths, if such they were. We were not permitted to remove any portion of the diseased tissue for microscopical examination, as we should like to have done, as it had been requested by the patient that no portion of his tissue should be removed from the body. It is remarkable that any human being could have survived so long, with such an entire arrest of nutrition, and such extensive lesions of the digestive apparatus, as existed in this case. But it may be attributed, in part, to the principle of vital tenacity, which we find very strongly marked in some cases, together with the small amount of nutrition derived from the milk diet, taken during the last two months of the patient's illness.

Mr. Editor please excuse the length to which I have detailed this report.

BOOK NOTICES.

OBSERVATIONS ON THE NATURE AND TREATMENT OF POLYPUS OF THE EAR. By EDWARD H. CLARK, M.D., Prof., etc. Boston: Ticknor & Fields.

This is a pamphlet of seventy-one pages, most artistically gotten up on tinted paper, and illustrated by two plates of

thirteen figures. It is divided into two parts; part first consisting of a record and analysis of twelve cases; part second entering into an elaborate "description of polypoid growths of the ear, and their treatment, based chiefly on the preceding cases."

EDITORIAL.

Back Numbers.

Thanks to the kind responses of our friends, we have received a sufficient number of Journals to complete the files of all who have applied for missing numbers in 1867. No more copies are needed, and if any who have written for extra ones have not received them, by dropping us a line they will be forwarded by return mail.

Circular.

Attention is directed to the following Circular, which explains itself:

DECATUR, ILL., Jan. 23d, 1868.

Having been appointed Chairman of the Committee on Obstetrics, by the Illinois State Medical Society, at its last annual session, I would respectfully and earnestly solicit your aid in furnishing material for Report.

A timely answer to any or all the following questions will be gratefully received and duly credited.

I desire to know:

I. The number of births that have occurred within your knowledge during the past year.

II. Number of males and females, and weight of each.

III. Number of abortions and premature labors, with causes which induced them.

IV. Number of still-born children, male and female, with causes. State time of child's death, whether before or during labor—if before, how long.

V. Number of children, male and female, born alive, who have died within twenty-four hours after birth.

VI. Number of cases prolonged *gestation*, with number of days beyond the ordinary period.

VII. Number of monstrosities.

VIII. Number of multiple births, with sex in each case.

IX. Number of cases of instrumental labor, with kind of instrument used.

X. Number of complicated labors, with nature of complication and results.

XI. Number of cases of hæmorrhage, before, during, or after labor, whether concealed or otherwise, with results.

XII. Number of cases of *adherent placenta*, with results.

XIII. Number of cases of *puerperal convulsions* occurring before, during, or after labor, with outline of treatment and results.

XIV. Number of cases of *puerperal mania*, with causes, treatment and results.

XV. Number of cases *puerperal fever*, with outline of treatment and results.

XVI. Number of cases *cellulitis*, with cause, treatment and results.

XVII. Number of cases of rupture of *womb, vagina* or *perineum*, with treatment and results.

XVIII. Number of new remedies applicable to puerperal women.

XIX. Number of new obstetrical instruments, or new improvements of old ones.

XX. Number cases of *atresia vaginæ*, with causes, treatment and results.

XXI. Number cases of inversion of uterus, with causes, treatment and results.

Any thing of unusual interest connected with Obstetrics, not included in or suggested by the foregoing, will be most gratefully received.

A prompt answer is very desirable. Every thing that will appear in the Report must reach me by the 1st, or at farthest, by the 15th of March.

E. W. MOORE, M.D.

Advertising Specialties.

Albeit in "goodlie companie," the Editor acknowledges being "sold" in a recent case. "For particulars see small bills," and the pages of a monthly contemporary in this city. An inch was given, an ell taken, whereupon our contemporary waxes mildly savage, and gives the takers the — *ell* with an aspirate. "Thereby hangs a tale," which we have not time, just now, to unfold; because to-day we descend from the tripod, throw physic for the nonce to the dogs, and, for a few days only, leave this great and wicked city, where the carcasses do so much abound which the eaglets, of the specialist variety alluded to, do scent afar off. We seek a breath of God's pure air, and on our return may launch an arrow at venereal and venal advertisers, not

forgetting a quiver full thereof at sundry others who advertise their professional wares under the foxy captions "Medical Education," or "Medical Reform."

Messrs. Bliss & Sharp,

144 Lake Street, have shown us a neat little *tubular cork-screw*, which seems well adapted for its purpose.

"By screwing the tap into the cork of a bottle containing soda-water champagne, or other aerated beverage, any quantity may be drawn off at pleasure, and what remains in the bottle will not lose its effervescing property. In this manner the contents of the bottle can be taken at pleasure, without extracting the cork, and all waste avoided.

Its convenience is so obvious, that we presume it will find its way into general use. The following directions are given :

"The wire must not be unloosed. Make room between the double wires on the top of the cork, by setting them aside so that the tap shall enter between them; then with one of the loose points on the end of the tap, screw it through the centre of the cork till the point of the screw is seen under the cork. Should the pressure prevent the point from dropping into the bottle, give it a shake, and the point will fall away. Hold the bottom of the bottle upwards, turn the stopper, and draw the quantity required. In this manner ten or more draughts may be had from one bottle. When the bottle is empty draw the cork out."

Duns.

Nothing is more disagreeable than a dun; but it has this ameliorating circumstance, that it has a certain prophylactic — PREPAYMENT. Several thousand dollars of arrearages are shown upon the books of the JOURNAL. The only way to collect these is shown, by experience, to be by duns. The editor is willing to *give* his time and labor to the conduct of the JOURNAL, but finds it indispensable occasionally to call upon subscribers for dues. As the invitation to pay up is general, he trusts no one will consider the dun as a personal insult. And if any are omitted in passing the collector's hat, it is hoped they will not, if indebted to the JOURNAL, consider it as a personal slight. Duns are sent out by business agents—if mistakes occur in transaction of business matters with several thousand different persons, it should aggrieve no one. "Sharp" letters

need not be penned, as all real mistakes will be most cheerfully rectified on simple notification.

Paris Items.

From a private letter we scissor these bits of medical gossip:

"Prof. Richet, one of the best surgeons in Paris, attempted to perform ovariectomy on a woman thirty-five years old. After working an hour, he found so many adhesions that he was obliged to discontinue the operation, dress the wound, and send the woman back to bed, where she will, undoubtedly, soon die. Truly the French surgeons have no success with this part of surgery. Either they can not do it properly, or else their subjects are bad, for they invariably die. Prof. Nelaton has discontinued his hospital service to be named, as it is said, Senator. He has been in great favor at court for some time, and probably Napoleon desires to honor him as much as his physician, Dr. Comeau, who, you are aware, has attained the Senatorial honor. Many changes have been made in the medical school within the last few months. Many of the venerable old professors having either died or been put *hors de combat*, to be replaced by a younger generation. Some of the newly-appointed, for young men, have already obtained much celebrity."

We regret to hear this report of M. Nelaton, after his previous dignified refusal to wade in the mire of politics. Alas for the great surgeon who

"Born to a universe, narrows his mind,
And to a platform gives up what was meant for mankind."

When a doctor meddles with politics, he should cease finding fault with parsons for meddling with physic. Which reminds us of the current rumor that *the* apostle of medical reform is, to the detriment of his *Æsculapian* robes, putting himself in training for the lower (if possible) house in Congress. It can no longer be said, "they do these things better in Paris." The probe that touched the bullet in Garibaldi's ankle has, unfortunately, proved a lever to hoist poor Nelaton into the Senate, and thence into professional eclipse and total obscurity.

LOOT.

Iodine and Carbolic Acid.

Dr. Percy Boulton, to remedy the inconvenience attending the external application of iodine and its preparations, has adopted the method of adding a few drops of carbolic acid to the iodine solution to be employed. The formula is as follows: Compound tincture of iodine, 3 grms; pure liquid carbolic acid, 6 drops; glycerine, 30 grms; distilled water, 150 grms. This carbolate of iodine is not perfectly colorless, so that it may be applied with impunity; and it is not only one of the most powerful antiseptics we possess, but is intrinsically a more efficacious agent than iodine alone. In the form of injections, gargles, and lotions, for sore throat, ozæna, abscess in the ear, etc., this preparation is a sovereign remedy.—*Extract from a letter in the Journal des Connaissances Médicales.—Med. Gazette.*

Gentian Root as a Dilator.

Professor Winckel, in Rostock, recommends (Deut. Klinik, 1867) the radix gentianæ rubræ as a new, simple and cheap means of dilatation for surgical and gynecological purposes. His attention was first directed thereto by an article of John Jacob Hacberl, published in 1834, in which the author states that, having operated for atresia uteri, and desiring to keep open the orifice made by the trocar, he introduced a good firm plug of radix gentianæ, and that on the following day he found no small difficulty in withdrawing the same, which had increased to twice its former size. According to Dr. Winckel's observations, the gentian root has the following advantages over laminaria: 1st, its cheapness, the ease with which it can be obtained, and the fact that the physician can so easily cut plugs and bougies of any size to suit his requirements. 2nd, its somewhat smaller power of absorption, as compared with laminaria, is compensated by our being able to obtain larger pieces of it (one and a half to two inches in diameter), so that

it can be used for the dilatation of openings already too large for laminaria. 3rd, the fact of its remaining free from smell constitutes an immense advantage, for even laminaria, though in a much less degree than sponge-tents, often becomes quite fetid. The radix gentianæ may, therefore, be used with special advantage in strictures of the vulva, vagina, and uterus; for tamponing the uterus in smaller hæmorrhages, for the induction of abortion, for dilatation after operation for atresia of the genital organs. Whether it is also applicable to stricture of the urethra, to affections of the lachrymal ducts, etc., remains to be seen.—*Med. Record, from All. Med. C. C. Ztg., 1867.—Medical Gazette.*

Dr. Maisonneuve has also an apparatus contrived by him for the purpose of removing the cause which most frequently occasions death after amputation. He maintains that the feverish symptoms, which appear in a variety of shapes, in all cases of wounds, and constitute the chief danger of surgical operations, are invariably the consequence of poisonous action. This, in his opinion, is owing to the fact that the liquids exuding from sores are deprived of vitality by contact with the atmosphere, then undergo a process of putrefaction, and are thus converted into dangerous poisons. He thence concluded that if he could prevent these dead liquids from becoming putrefied at the surface of the solution of continuity, the amputation of limbs might be effected without in the slightest degree endangering the patient's life. In order to obtain this result, Dr. Maisonneuve conceived the idea of subjecting the stump of the amputated limb to a constant process of suction, whereby the liquids might be abstracted as soon as they appear. For this purpose he has contrived a sort of india-rubber hood, which may be put upon the stump after preliminary dressing; that is, after the ligature of the blood vessels has been duly performed, the wound properly washed, and the borders kept together by means of straps of diachylon plaster, but so as not to prevent the exudation of the dangerous liquids. The hood, which, at its orifice, firmly embraces the stump, is provided at the opposite extremity with an india-rubber tube communicating with a tubulated balloon; which in its turn communicates with a suction pump. In this way, owing to the vacuum made, the obnoxious liquids are carried off, and the hood, collapsing on the stump, keeps the borders of the wound firmly pressed together.—*Cor. Leavenworth Herald.*